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ABSTRACT

The manner in which social support mediates the relationship between stressful life events and psychological distress was examined. A random sample of 320 adult community residents completed and returned a questionnaire assessing levels of life stress, social support, and psychological adjustment. As hypothesized, a social support-life stress interaction term accounted for a statistically significant proportion of the variance for two adjustment outcome measures. Additionally, two methods of assessing social support were contrasted: one focusing on the qualitative aspects of the supportive relationships, the other on the quantitative aspects of the relationships. The results are discussed in light of frequent claims made concerning the efficacy of intervention programs based on the facilitation of natural social support networks. (Author/BEF)

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SOCIAL SUPPORT, LIFE STRESS, AND PSYCHOLOGICAL ADJUSTMENT

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SOCIAL SUPPORT, LIFE STRESS, AND PSYCHOLOGICAL ADJUSTMENT

During the past two decades a fairly impressive body of evidence has mounted suggesting a relationship between a number of "stressful life events" and psychological distress, with most researchers viewing these events as precipitating or perpetuating factors. One line of research has focused on the impact of specific social stressors, such as job loss (Cobb, 1974), natural disasters (Erikson, 1976), and bereavement (Lindemann, 1944) on psychological well-being.

A second and more recent line of research has focused on the joint contributions of a wide variety of stressful life events to both physical and psychological distress. Stressful life events have been defined as any set of circumstances the advent of which requires or signals change in the basic life pattern of an individual (Holmes & Rahe, 1967).

While numerous studies have found statistically significant correlations between life event measures and level of psychological distress (c.f., Dohrenwend & Dohrenwend, 1974; Rabkin & Struening, 1976), the magnitude of the obtained correlations have generally been in the .30 to .40 range. While the importance of a particular correlation coefficient is, to an extent, in the eye of the beholder, these correlations have not been of an overwhelming magnitude. Nor should this be surprising. Individuals quite obviously react differently to varied levels of life change. Given the same amount of life change, different individuals will cope differently and experience differing levels of stress. Given the same level of stress, individuals

will show different levels of psychological distress, depending on a variety of biological, psychological, behavioral, and situational factors which interact in complex ways to determine an individual's psychological well-being.

Stressful life event researchers have only recently begun to study the interactions of these factors with life change in predicting level of psychological distress. One particular factor receiving growing recognition as a variable potentially mediating or conditioning the life change - psychological distress relationship is the availability of supportive social relationships which serve as a protective buffer for the person confronted with a stressful situation. According to Caplan (1974), social support systems consist of "continuing social aggregates that provide individuals with opportunities for feedback about themselves and for validations of their expectations of others." These supporters provide emotional sustenance, tangible resources and aid, and information and cognitive guidance in times of need. By providing emotional sustenance, supportive others help individuals to master their own emotional problems by mobilizing their own psychological resources. Additionally, by providing the person with tangible aid, resources, and information and guidance, they further enhance his/her ability to cope with the stressful situation.

Stressful life event researchers have identified social support as an especially important potential mediator of the life change - psychological distress relationship. Antonovsky (1974) has theorized that ties to supportive others serve as a generalized resistance resource to the effects of social stressors. Others seem to agree with this contention

(Cobb, 1974; Dohrenwend, 1978). Cassel (1974; 1976) in a theoretical analysis of the relationship between psychosocial factors and stress, has suggested that social supports serve as "protective factors buffering or cushioning the individual from the physiologic or psychologic consequences of exposure to the stressor situation" (p. 478). According to Cassel, the relationship between social stressors, social support, and psychological distress is an interactive one. In the absence of social stressors, social support has no influence on level of psychological distress. As stressful life events increase, however, social support is said to affect level of distress in the following manner: at low levels of social support the relationship between life events and psychological distress should be strongly positive; as social support increases, the association between life events and distress should decrease and perhaps disappear under conditions of maximal support. This hypothesized "buffering effect" is depicted in Figure 1. Despite this recognition of the potential importance of social support, little emperical evidence presently exists which focuses on this protective or buffering feature of social support.

While a number of studies seem to bear indirectly on the "buffering hypothesis," only a few studies have directly examined the hypothesis, and these studies have focused on the role social support plays in mediating the relationship between specific stressful life events and physiological indices of strain. French and his collegues (1974; Caplan, Cobb, Harrison, French, & Pinneau, 1975) studied the role of social support as a meditor of two job-related stressors: (1) work load, and (2) role ambiguity. They found that these two stressors were significantly correlated with a variety of measures of strain for persons with low

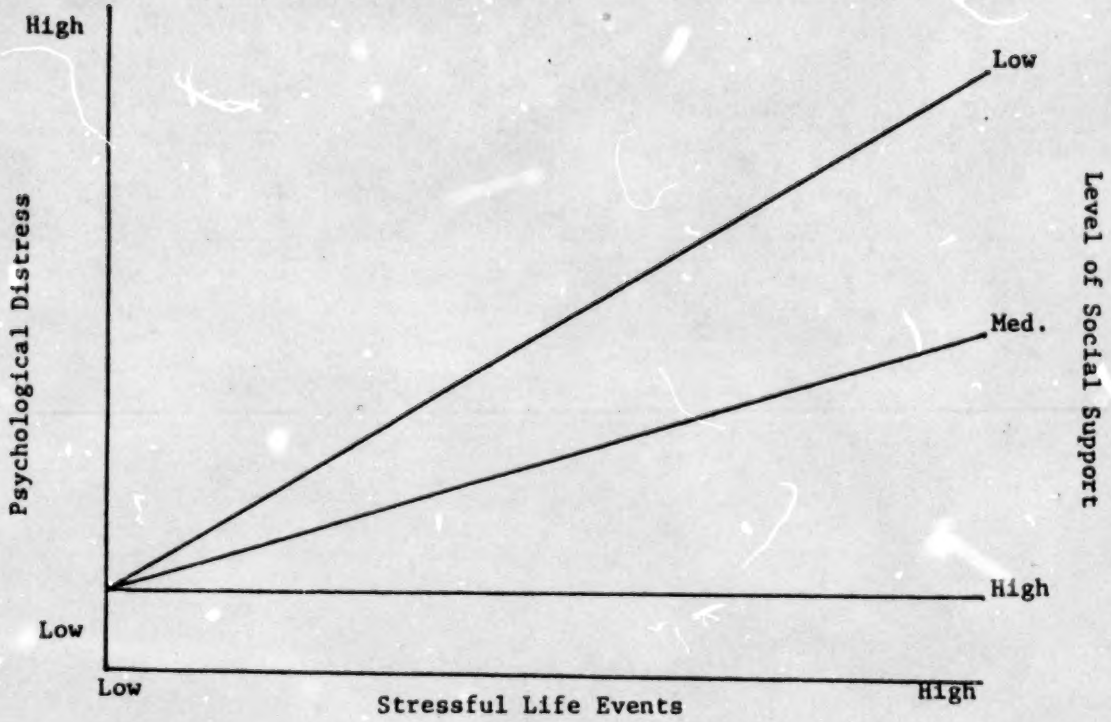

FIGURE 1.

HYPOTHESIZED BUFFERING EFFECT OF SOCIAL SUPPORT ON THE RELATIONSHIP BETWEEN STRESSFUL LIFE EVENTS AND PSYCHOLOGICAL DISTRESS

levels of social support but not for persons with adequate levels of support. Cobb (1974) and Gore (1978) found that men who received high levels of emotional support from family and friends following the closing of the plant they worked at showed lower levels of physiological strain than did those with low levels of support. Social support itself did not influence level of strain in a control group of stably employed men.

The present study sought to extend this line of inquiry by examining the manner in which social support mediates the relationship between stressful life events and psychological distress.

METHODOLOGY

Subjects for the study were respondents to hand-delivered questionnaires distributed to a random sample of 500 Austin residents. Of the 500 questionnaires distributed, 320 acceptable completed questionnaires were returned, yielding a return rate of 64 percent. Chi square analyses indicated that the probability of being a respondent or nonrespondent was not associated with any of a number of demographic variables.

Level of social support was assessed using the Social Support Index (SSI) which is composed of three factors: emotional support, tangible support, and informational support. Support was also defined by a variable measuring the number of close friends the respondent had. Life stress was assessed using a brief 60-item version of the Psychiatric Epidemiology Research Interview (PERI) (Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978), which is a modification of the more familiar Holmes and Rahe (1967) Social Readjustment Rating Scale. Level of psychological distress was tapped by two scales: the Langer 22-item Mental Health Index (MHI), and the tension-anxiety subscale of the Profile of Mood States (POMS-T).

RESULTS

As in previous studies, the correlations between the stressful life events measure and the measures of psychological distress were statistically significant: r=.25 for the MHI and r=.33 for the POMS-T. A subset of stressful life events which are beyond the individual's control were examined in relationship to the two distress measures. Both of these correlations were statistically significant: r=.27 for the MHI and r=.34 for the POMS-T. Given that these events are logically independent of the respondent's psychological status, the results of this analysis provide stronger support for the contention that stressful life events produce psychological distress in a general non-patient population.

The hypothesis that social support buffers or conditions the relationship between stressful life events and psychological distress involved testing whether an interaction term (a multiplicative product of the stressful life events and social support variables) contributed significantly to the prediction of the psychological distress measures. The equation necessary to assess the four interactional hypotheses (the two support variables in combination with the life events variable in predicting the two distress measures) takes the form:

$\hat{Y}=B_1X_1 + B_2X_2 + B_3X_1X_2 + A$ where

$\hat{Y}$= the predicted value of the criterion variable

X_1= the stressful life events variable

X_2= the social support variable

X_1X_2= the product of the stressful life events and the social support variables.

The regression model of choice for testing the four interactional hypotheses is the hierarchical model (Cohen, 1978).

In order to confirm the four hypotheses, the interaction terms should account for a significant proportion of the variance of the criterion measures. Additionally, the form of the interaction should be similar to that shown in Figure 1.

With the MHI as the criterion variable and the SSI as the social support variable, the life events by support interaction accounts for a statistically significant ($p<.001$) 12 percent of the variance. The nature of this conditionality can be clarified by expressing the relationships between the study variables graphically. Three regression lines were created by giving three values to X_2, the support variable. The three values used were the mean, +1 standard deviation, and -1 standard deviation. The results of this exercise are presented in Figure 2. As can be seen, high social support cases show only a slight regression of MHI on life events; low support cases, on the other hand, display a substantial linear regression. Thus, as social support decreases, the slope of MHI on PERI becomes steeper. This finding is in accord with the buffering hypothesis.

An additional analysis sheds further light on this conditional relationship. Significance tests of the unstandardized regression coefficients (B) reveal that the differential slope of MHI on PERI is dependent on the PERI by SSI interaction rather than on the SSI variable per se (B_2 is not significant ($F=2.94$) whereas the other two B values are statistically significant).

The results of the analysis with the Profile of Mood states tension-anxiety subscale as the criterion variable reveal essentially the same pattern of results. The PERI by SSI interaction accounts for nine percent of the variance, which is significant at the .001 level. The nature

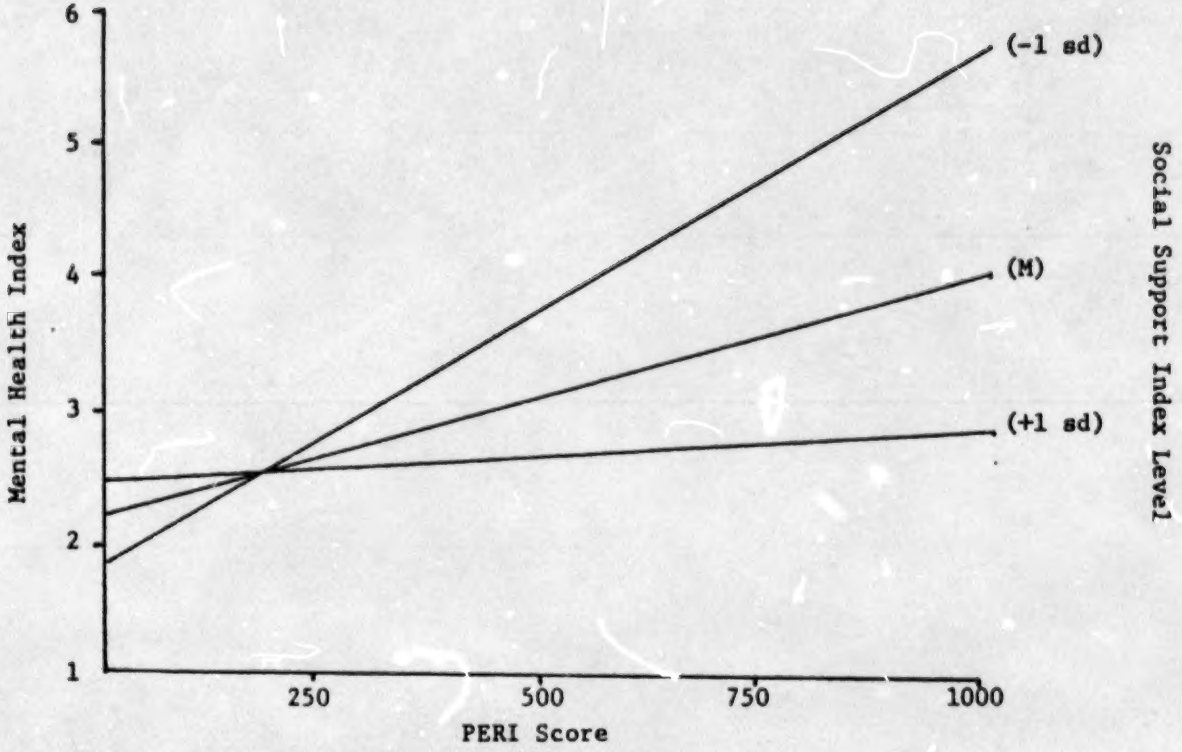

FIGURE 2.

REGRESSION OF MENTAL HEALTH INDEX ON STRESSFUL LIFE EVENTS FOR THREE VALUES OF SOCIAL SUPPORT INDEX

of this conditionality is shown in Figure 3. Again, the differential slope of POMS-T on PERI is not dependent on social support per se, but rather on the PERI by SSI interaction.

The final two analyses differ from the previous two in that the index of social support used is the number of supporters. With the MHI as the criterion variable, the interaction term accounts for three percent of the variance, which is significant at the .01 level. The nature of this conditionality is shown in Figure 4. With few supporters, the slope of MHI on PERI is substantially positive. With many supporters, the slope is negligible. The value of B_2 is not significant (F=.81), thus the observed differential slope of MHI on PERI is due to the interaction rather than to the number of supporters alone.

The final analysis used the POMS-T as the criterion variable. The interaction term accounts for a statistically significant three percent of the variance ($p<.01$). The nature of the interaction is shown in Figure 5 and, as can be seen, is essentially the same as in the previous three analyses. Again, the unstandardized regression coefficient for the support variable (B_2) is not significant (F=.86).

DISCUSSION

Stressful life events, as was mentioned earlier, have consistently been found to be significantly associated with psychological distress, although the magnitude of the relationship found has generally been quite modest. This is not surprising, though, if one considers the multitude of factors influencing the psychosocial stress process (Mechanic, 1970; Moos, 1979). The present study examined one particular factor, social support, which has been hypothesized as a significant mediator of the stressful life events - psychological distress relationship.

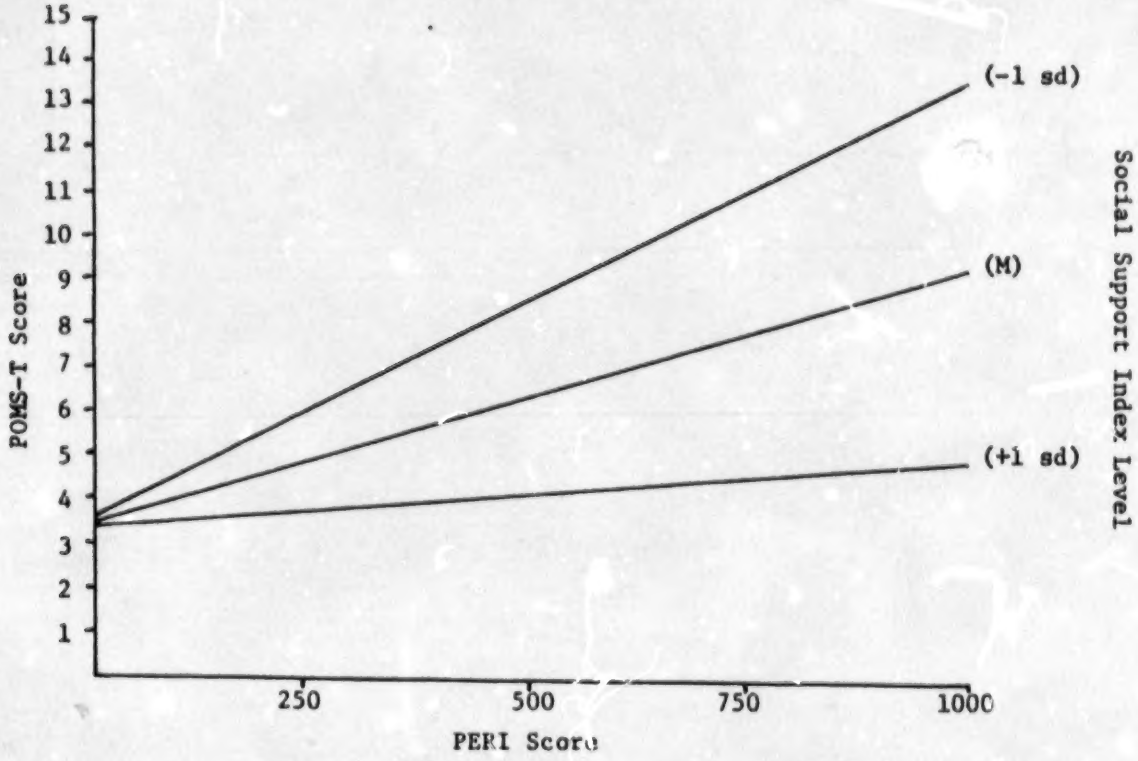

FIGURE 3.

REGRESSION OF PROFILE OF MOOD STATES TENSION SUBSCALE ON STRESSFUL LIFE EVENTS FOR THREE VALUES OF SOCIAL SUPPORT INDEX

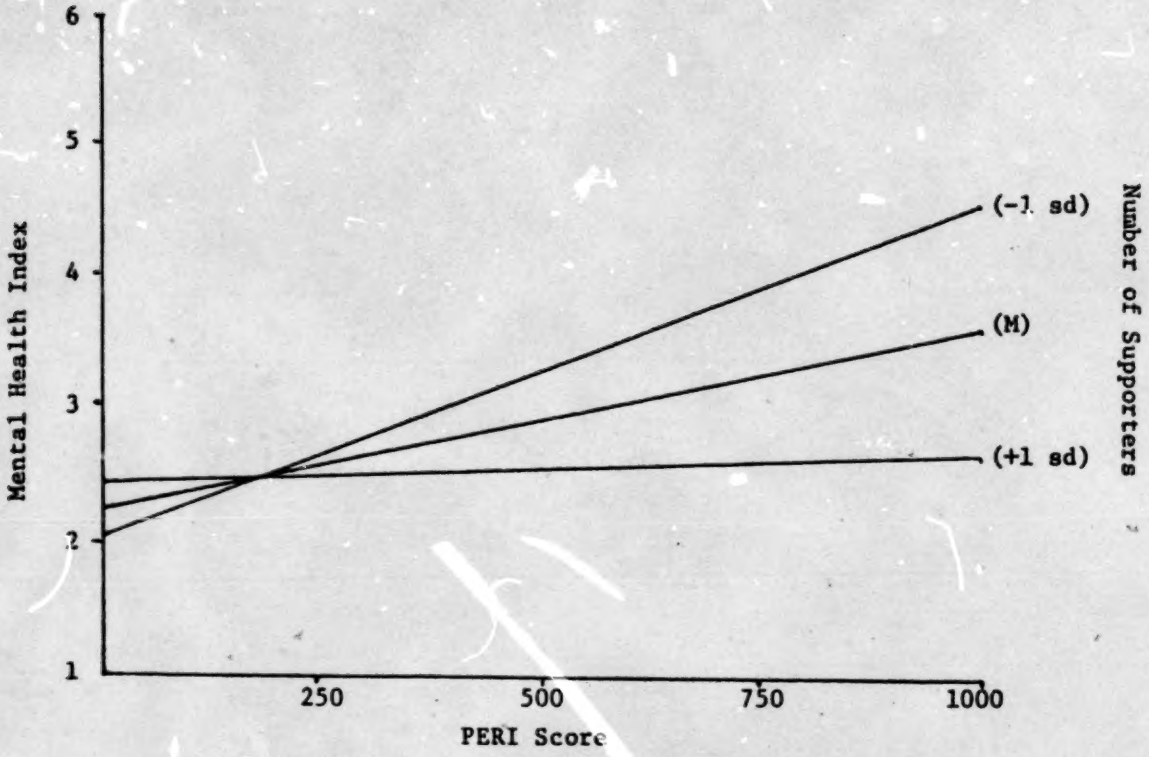

FIGURE 4.

REGRESSION OF MENTAL HEALTH INDEX ON STRESSFUL LIFE EVENTS FOR THREE VALUES OF NUMBER OF SUPPORTERS

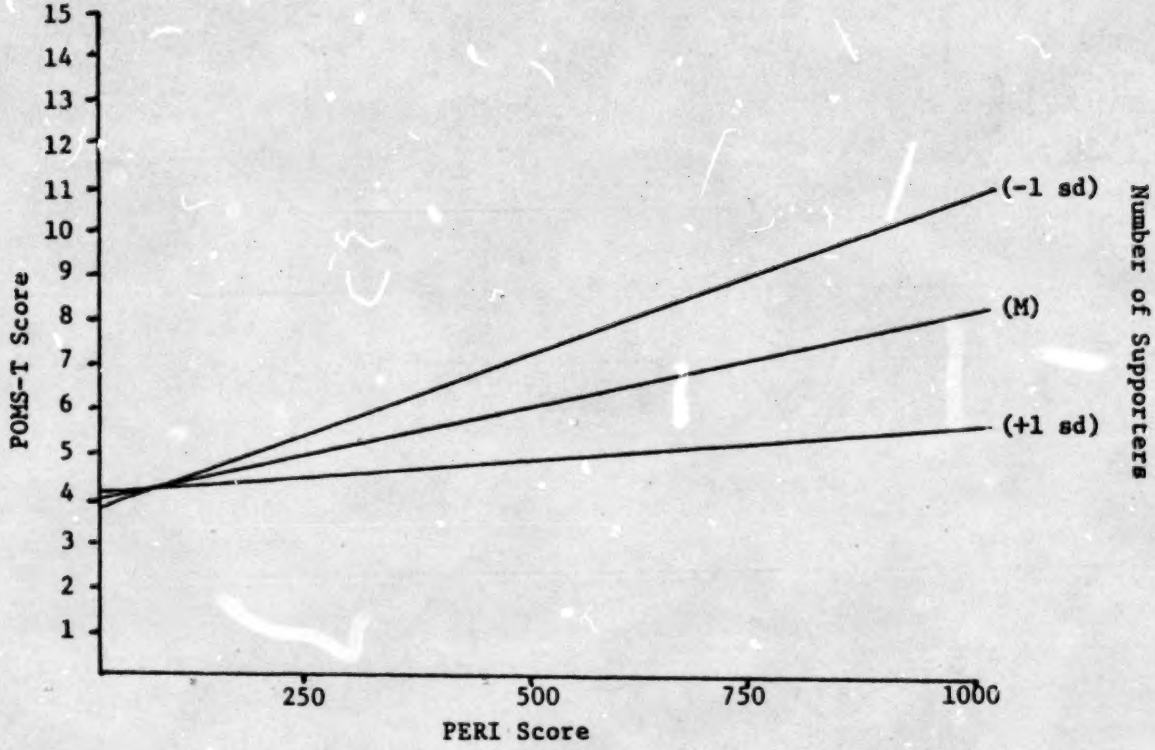

FIGURE 5.

REGRESSION OF PROFILE OF MOOD STATES TENSION SUBSCALE ON STRESSFUL LIFE EVENTS FOR THREE VALUES OF NUMBER OF SUPPORTERS

The "buffering hypothesis," --that at high levels of life change social support protects the person from the deleterious effects of such events but at low levels of life change social support is unrelated to level of psychological distress--provided the theoretical basis for this study.

Two hypotheses predicted that the PERI by SSI interaction would contribute significantly to the prediction of two psychological distress measures. Both of these hypotheses were supported. The nature of the interactions conformed closely to that predicted by the buffering hypothesis.

The final two hypotheses predicted the same set of relationships between life events, number of supporters, and distress. Again, both hypotheses were supported, although for these two analyses the interaction term accounted for only an additional three percent of the variance. The question of whether these significant (statistically) findings are meaningful must be considered. These results are not as convincing as are those in which the SSI was used as the support variable. Interestingly, the correlation between the two support variables is only .58, which is not as high as might be expected from two variables supposedly tapping the same construct. The SSI, which was designed to assess the quality of a person's supportive network, rather than the number of persons providing that support, seems to be the more important factor with respect to the buffering effect of social support on psychological distress.

The terms "social support," "support systems," and "support networks" are presently in vogue in the field of community psychology. The concept of social support underlies many of the recommendations recently

offered by the President's Commission on Mental Health regarding the form human service systems should take in the future (President's Commission on Mental Health, 1978). It is commonly asserted that by increasing the availability of social support in the general population, the level of psychological distress in the population might be significantly decreased, thereby decreasing utilization of health and mental health services.

Despite the clear potential social support has for application, the concept of social support has generated suprisingly little research. The present study represents a "baby-step" in coming to terms with this issue. Those who ardently believe in the utility of social support should not lose sight of the limitations of our present knowledge. While it may be true that social support plays an espicially significant role in the stress process, just as Mechanic (1974) and others argue, we are still largely in the dark as to how and why this might be the case.

This in not to argue that practitioners should cease attempting to create networks of support for persons, organizations, and communities. Facilitating the availability of natural and other informal sources of support represents an important role for the community psychologist (Iscoe, 1974; Wilcox, Spearly, & Moore, 1979). What is being suggested is that these programs be viewed as field experiments rather than as interventions of proven utility. In this manner these interventions could contribute to our knowledge regarding social support.

TABLE 1

MULTIPLE REGRESSION ANALYSIS OF MENTAL HEALTH INDEX ON PERI (12 MO.), SSI (TOTAL) AND PERI BY SSI INTERACTION (HIERARCHICAL SOLUTION)

	B	STD ERROR B	MULTIPLE R	R^2	R^2 CHANGE	F	p
I	.00781	.00089	.245	.060	.060	26.87	.001
	.07008	.04081	.416	.173	.113	50.29	.001
ERACTION	-.00051	.00007	.541	.293	.120*	53.75	.001
STANT	.29282	.50050					

*R^2change for 2 mo. PERI = .136

TABLE 2

MULTIPLE REGRESSION ANALYSIS OF PROFILE OF MOOD STATES-TENSION SUBSCALE ON PERI (12 MO.), SSI (TOTAL) AND PERI BY SSI INTERACTION (HIERARCHICAL SOLUTION)

	B	STD ERROR B	MULTIPLE R	R^2	R^2 CHANGE	F	p
RI	.01827	.00209	.327	.107	.107	51.35	.001
I	.03076	.09585	.502	.252	.145	69.97	.001
TERACTION	-.00108	.00016	.584	.341	.089*	42.70	.001
NSTANT	3.23051	1.17557					

*R^2 change for 2 mo. PERI = .097

TABLE 3

MULTIPLE REGRESSION ANALYSIS OF MENTAL HEALTH INDEX ON PERI (12 MO.), NUMBER OF SUPPORTERS AND PERI BY NUMBER OF SUPPORTERS INTERACTION (HIERARCHICAL SOLUTION)

	B	STD ERROR B	MULTIPLE R	R^2	R^2 CHANGE	F	p
ERI	.00347	.00072	.245	.060	.060	19.55	.001
UMBER SUP	.10607	.11806	.278	.077	.017	5.52	.020
NTERACTION	-.00078	.00025	.325	.105	.028*	9.20	.005
ONSTANT	.94264	.38686					

*R^2 change for 2 mo. PERI = .055

TABLE 4

MULTIPLE REGRESSION ANALYSIS OF PROFILE OF MOOD STATES-TENSION SUBSCALE ON PERI (12 MO.), NUMBER OF SUPPORTERS AND PERI BY NUMBER OF SUPPORTERS INTERACTION (HIERARCHICAL SOLUTION)

	B	STD ERROR B	MULTIPLE R	R^2	R^2 CHANGE	F	p
ERI	.00977	.00170	.327	.107	.107	40.81	.001
UMBER SUP	.08100	.27621	.378	.143	.036	13.69	.001
NTERACTION	-.00197	.00058	.416	.173	.030*	11.58	.001
ONSTANT	3.76348	.90510					

*R^2 change for 2 mo. PERI = .042

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